

### **REMARKS**

Claims 1-13 are pending in this application. The Examiner rejected Claims 1-13 under 35 U.S.C. §103(a).

### **CLAIM REJECTION – 35 U.S.C. §103(a)**

Claims 1-13 stand rejected as being unpatentable over U.S. Patent No. 4,326,212 to Bergeron et al. ("*Bergeron*") and U.S. Patent No. 4,149,906 to De La Moneda ("*De La Moneda*"). This rejection is respectfully traversed for the reasons discussed below.

The Applicant has amended Claims 1, 6 and 7 in order to make the differences between the present invention and *Bergeron* clearer, since the Examiner seems to be misunderstanding the configurations of the present invention as defined by independent Claims 1 and 6 and that of *Bergeron*.

### **Claim 1**

On page 3 of the Office Action, the Examiner referred to Fig. 1d of *Bergeron* in making comparison between the invention of Claim 1 and *Bergeron*. However, Fig. 1d of *Bergeron* shows an intermediate state of the fabrication process, and this figure should not be compared with the invention of Claim 1. Rather, the completed configuration of the fabrication process shown in Fig. 1d corresponds to Fig. 1j. Therefore, the configuration of *Bergeron* shown in Fig. 1j should be compared with the configuration of the present invention shown, e.g., in Fig. 2C.

A lateral transistor of the present invention as defined by Claim 1 requires, among other elements, a second main electrode region of the first conductivity type disposed in and at the top surface of the uniform base region of the second conductivity type so as to directly contact with the uniform base region, the second main electrode region being aligned in the lateral direction with the first main electrode region configured such that a main

current of the lateral transistor flows along the lateral direction between the first and second main electrode regions.

In contrast, *Bergeron* does not disclose or suggest a second main electrode region of the first conductivity type disposed in and at the top surface of the uniform base region so as to directly contact with the uniform base region, the second main electrode region being aligned in the lateral direction with the first main electrode region configured such that a main current of the lateral transistor flows along the lateral direction between the first and second main electrode regions. To consider the P+ PNP collector contact 60 of *Bergeron* as corresponding to the second main electrode region of Claim 1, the PNP collector contact 60 of *Bergeron* is directly contacting with the P base region 40 and the boron implanted P intrinsic base region 76 (see Column 5, lines 16-31), rather than the n-type uniform base region 31 as required by Claim 1 (see Fig. 2C). Although the terminology of "base 40" is used in *Bergeron*, "the base 40" of *Bergeron* in fact serves as a collector region or drift region of the lateral pnp bipolar transistor that comprises p-type emitter region 62, n-type base region 36 and p-type collector contact 60. The term "base region 40" is used because it serves as a base region for the vertical npn bipolar transistor that comprises n-type collector regions 54, p-type intrinsic base region 76 and n-type buried emitter region 6.

Since *De La Moneda* pertains to a vertical transistor, whereas the present invention as defined by Claim 1 pertains to a lateral transistor, it is impossible to combine *De La Moneda* and *Bergeron*.

Accordingly, the structural and functional combinations recited in Claim 1 would not have been obvious to one of ordinary skill from the cited references, at the time the Applicant made the claimed invention.

#### **Claim 6**

Claim 6 contains similar limitations as Claim 1. The remarks made above in support of Claim 1 are also applicable to distinguish Claim 6 from the cited references.

**Claims 2-5 and 7-13**

Claims 2-5 and 7-13 depend from independent Claims 1 and 6. The remarks made above in support of the independent claims are equally applicable to distinguish the dependent claims from the cited references.

Consequently, in light of the above discussion and in view of the present amendment, the Examiner's rejection against Claims 1-13 under 35 U.S.C. §103(a) as unpatentable over *Bergeron* and *De La Moneda* is respectfully requested to be withdrawn.

The foregoing is submitted as a complete response to the Office Action identified above. This application should now be in condition for allowance, and a notice to that effect is solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "R. T. Frost", with a long horizontal flourish extending to the right.

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